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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/646,008	08/22/2003	Sung-Jac Moon	YOM-0048	8963

7590
Cantor Colburn LLP
55 Griffin Road South
Bloomfield, CT 06002

07/05/2007

EXAMINER

NGUYEN, HOAN C

ART UNIT	PAPER NUMBER
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2871

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PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/646,008

Applicant(s)

MOON, SUNG-JAE

Examiner

HOAN C. NGUYEN

Art Unit

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 23 April 2007.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-5, 7-10, 13-15 and 18-22 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-5, 7-10, 13-15 and 18-22 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Response to Amendment

Applicant's arguments with respect to claims 1-5, 7-15 and 18-22 based on the Response filed on 04/23/2007 have been considered but are in the old ground(s) of rejection. Therefore, this is Final action.

Examiner would like to thank applicants to make a change in Fig. 6 and submit the substitute specification to overcome the 112 rejection in the last non-final action.

Since the applicants does not mention how signal to transmit to a first driving signal wire in claim 1 from the internal IC or from outside signal through wire 320 in Fig. 6.

Therefore, examiner will reject claim 1 basing on "signal transmitting to a first driving signal wire from the internal IC".

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

1. Claims 1-5, 7-15 and 18-22 are rejected under 35 U.S.C. 102(b) as being anticipated by Imajo et al. (US2001/0015709).

Imajo et al. teach (Figs. 34-37) a liquid crystal display device comprising:

Claim 1:

- a liquid crystal panel including
 - a first display signal wire having a plurality of a first display signal lines (drain lines DL),
 - a second signal wire having a plurality of a second display signal lines (gate lines GL) that cross the first display signal lines,
 - a plurality of switching elements (in abstract) each of which is connected to both of one of the first display signal lines and one of the second display signal lines, and
 - pixel electrodes (in abstract) connected to the switching elements;
- a first driving signal wire transmitting driving signals for the first or second display signal lines as Fig. 26 shown (see attachment 2), wherein the first driving signal wire is separated from the first and second display signal wires, the switching elements, and the pixel electrodes, and includes a first pad connected thereto at its near end (at connection);
- a plurality of first connecting lines (see attachment 2) disposed between the first driving signal wire and a part of the first display signal wire DL, and connected to at least one of the first driving signal wire and the part of the first display signal wire.

Claims 2-4:

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- a plurality of drivers respectively connected to the first driving signal wire, wherein each of the drivers is in the form of a chip (IC1/IC2) and each of the drivers is formed on the liquid crystal panel as Fig. 35 shown.

Claim 7:

- a second driving signal wire transmitting driving signals for the first or second display signal lines as Fig. 26 shown (see attachment 2), wherein the second driving signal wire is separated from the first and second display signal wires, the switching elements, and the pixel electrodes, and includes a second pad connected thereto at its near end (at the connection).

Claim 14:

- a shorting bar (short-circuit line/common line ST shown in Fig. 26) connected to the first driving signal wire DL.

wherein

Claim 5:

- each of the drivers is directly connected to the first driving signal wire as Fig. 35 shown.

Claim 8:

- a distance between the first driving signal wire and the first display signal wire is smaller than a distance between the second driving signal wire and the first display signal wire as Fig. 35 shown.

Claim 9:

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- a plurality of second connecting lines disposed between the second driving signal wire and at least another part of the second display signal wire, and connected to at least one of the second driving signal wire and the another part of the second display signal wire.

Claim 10:

- the first and second connecting lines are alternately disposed as Fig. 26 shown (wherein connecting lines connect to BP outside and inside alternately).

Claim 11:

- one end of the connecting line is connected to the first display signal wire (DL), and another end thereof is connected to the first driving signal wire via IC.

Claim 12:

- the first connecting line comprises two sections that are electrically separated each other, and the two sections are respectively connected to the first display signal wire (DL) and the first driving signal wire via IC.

Claim 13:

- the first connecting line is electrically connected to the first display signal wire (DL) and the first driving signal wire via IC.

Claim 15:

- the first driving signal wire further comprises a plurality of second pads connected at PAD-A thereto at its intermediate portion.

Claim 18:

- the first driving signal wire extends to an edge of the panel.

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Claim 19:

- the first display signal wire transmits gate signals for inherently turning on and off the switching elements, and the second display signal wire transmits data signals for the pixel electrodes applied through the switching elements.

Claim 20:

- the first driving signal wire (data lines DDL/DGL and power supply lines PWL) transmits a gate-off voltage or a ground voltage (paragraph 133).

Claims 21-22:

- the first display signal wire transmits data signals for the pixel electrodes, and the second display signal wire controls inherently turning on and off of the switching elements such that the transmission of the data signals to the pixel electrodes is controlled, wherein the first driving signal wire transmits gray voltages, a clock signal, or a driving voltage to the drivers (paragraph 132).

Response to Arguments

Applicant's arguments filed on 04/23/2007 have been fully considered but they are not persuasive.

Applicant's ONLY arguments are follows:

- A. Imajo does not disclose "a first driving signal wire transmitting driving signals for first display signal lines, wherein the first driving signal wire is separated from the first and second display signal wires" of Claim 1.
- B. Imajo does not disclose "a plurality of first connecting lines disposed between the first driving signal wire and a part of the first display signal wire, and connected to the

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first driving signal wire, wherein the first connecting lines are electrically disconnected from the part of the first display signal wire" of Claim 1.

C. Imajo does not disclose "a first driving signal wire transmitting driving signals for first display signal lines, wherein the first driving signal wire is separated from the first display signal wire, and includes a first pad connected thereto at its near end".

Examiner's responses to Applicants' ONLY arguments are follows:

A. Imajo discloses "a first driving signal wire (a lower dummy bump DBP) transmitting driving signals by the IC for first display signal lines, wherein the first driving signal wire is separated from the first and second display signal wires". The claim 1 does not cited how the driving signal transmitting through a first driving signal wire from IC connecting to a first driving signal wire or from the outside signal source (of circuit line 320 in Fig. 6 of instant application) (?).

B. Imajo does disclose "a plurality of first connecting lines (upper dummy bump DBP) disposed between the first driving signal wire (lower dummy bump DBP) and a part of the first display signal wire (drain line), and connected to the first driving signal wire, wherein the first connecting lines are electrically disconnected from the part of the first display signal wire".

C. Imajo does not disclose "a first driving signal wire (lower dummy bump DBP) transmitting driving signals for first display signal lines, wherein the first driving signal

wire is separated from the first display signal wire (drain line), and includes a first pad connected thereto at its near end" (see attachment).

Conclusion

1. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to **HOAN C. NGUYEN** whose telephone number is (571) 272-2296. The examiner can normally be reached on **MONDAY-THURSDAY:8:00AM-4:30PM**.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David Nelms can be reached on (571) 272-1787. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

HOAN C. NGUYEN
Examiner
Art Unit 2871

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ANDREW SCHECHTER
PRIMARY EXAMINER

Attachment 2

